



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,464	12/04/2000	Gal Ben David	00/21303	6568

7590

06/23/2006

Martin D. Moynihan  
PRTSI, Inc.  
P.O. Box 16446  
Arlington, VA 22215

EXAMINER
----------

HORWAT, JENNIFER A

ART UNIT	PAPER NUMBER
----------	--------------

3768

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/727,464

Applicant(s)

DAVID ET AL.

Examiner

Jennifer Horwat

Art Unit

3768

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-133 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-133 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/14/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-133 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 85-106 of copending Application No. 09/641973. Although the conflicting claims are not identical, they are not patentably distinct from each other because the addition of the limitation "free-hand scanning" in the 09/641973 is an obvious modification over the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Objections***

3. Claim 49 is objected to because of the following informalities: The sentence "Please add a pointing device for the open surgery application" appears to have been inadvertently included in the claim. Each claim must begin with a capital letter and end with a period. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-26, 28-37, 39-49, 51-72, 74-96, 98, 100-121, 123-132 are rejected under 35 U.S.C. 102(e) as being anticipated by Weinberg (US 6628984). Weinberg discloses a system including a position sensor for determining the position and angulation for the detector in relation to a gamma ray emission source (col 2, lines 34-36). The system further includes a moveable detector capable of detecting radiation and a processor for integrating the position of the detector with the information detected by the detector (col 2, lines 30-40). Radiotracers are used, such as tumor-seeking radiotracers, as the source of radioactivity (col 1, 25-27). The detector is sensitive to radiation at multiple locations (col 2, lines 59-66), or spatially sensitive. Additionally, the

beam is narrowed by an aperture (figure 1, element 7). The position tracking system (figure 1, element 2) is based on an electromagnetic field (col 6, lines 12-19). The detector and tracking system are connected, as shown in figure 1 (elements 2 and 6). Registration may be done with data from anatomic imaging modalities, which projects the position of the source into a second system of coordinates (col 9, lines 35-63). The use of position sensors on the radioactive emission detector, which are visible in the imaging modality, allows the two position tracking systems to be a single position tracking system. It is inherent in the registration process that transformations may be mapped from coordinate system 1 to coordinate system 2 or vice versa. Multiple coordinate systems are also shown in figure 3. The imaging modality is disclosed exemplarily as either an ultrasound or a magnetic resonance imaging system. A data acquisition device and computer are included to do necessary computations and processing involved with the system and method steps presented. A surgical instrument, such as a needle, is used in connection with the detector (col 10, lines 21-37). The needle has its own system of coordinates, but is in rigid registration with the detector system (figure 10 and col 10, line 34). Alternatively, the needle may have a separate position sensor (col 10, lines 38-42). A second detector may be used to refine the position and eliminate some of the effects of Compton scattering (figure 8, elements 128 and 134) either in the same detector system or by the inclusion of a second detector and positioning system (figure 7). The two detector systems are physically connected via a flexible connector in the form of a cord (figure 9).

Alternatively, a PET or SPECT scanner may be used, which are positron radiation detectors (col 11, lines 35-40)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 27, 38, 50, 73, 122, and 133 rejected under 35 U.S.C. 103(a) as being unpatentable over Weinberg in view of Wainer, et al (US 5871013). Weinberg, as discussed above, substantially discloses the invention as claimed including that a radiotracer is used, such as a tumor-seeking radiotracer. However, Weinberg fails to explicitly disclose the use of particular radiotracers. Wainer also discloses a system and method for registration of nuclear medicine images including both functional and structural images and further discloses the use of Tc99 (col 6, line 43) for acquiring images of the liver. It is well known in the medical imaging art that radiotracers may be chosen to target specific anatomic regions in the body. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Weinberg in light of the teachings in the reference by Wainer in order to acquire images of a specific target, namely the liver.

8. Claims 97 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weinberg in view of Barrick, et al (US 2002/0087101). Weinberg, as discussed

above, substantially discloses the invention as claimed. Although Weinberg discloses the use of a biopsy needle, Weinberg does not explicitly disclose the use of a tissue resecting mechanism or an aspiration mechanism. Barrick also disclose a system for instrument tracking and further discloses that the system has been shown to be useful in the resection of tissue (paragraph 4) as well as with an aspiration mechanism (paragraph 80). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Weinberg in light of the teachings in the reference by Barrick to include the use of these surgical instruments, as Barrick clearly states that use of such instruments in a surgical instrument tracking system is advantageous.

### ***Conclusion***

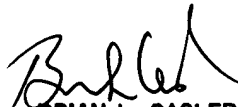
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cosman teaches a device of note.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Horwat whose telephone number is (571) 272-2811. The examiner can normally be reached on M-Th 7-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571) 272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jah  
6/7/2006

  
BRIAN L. CASLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3768